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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,635	02/25/2002	Charles Kannankeril	D-30270-01	4449

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Sealed Air Corporation
P.O. Box 464
Duncan, SC 29334

EXAMINER

AFTERGUT, JEFF H

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 09/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

10/082,635

Applicant(s)

KANNANKERIL ET AL.

Examiner

Jeff H. Aftergut

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 1-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,3,5. 6) ☐ Other: _____

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Election/Restrictions

1. Applicant's election with traverse of Group II, claims 12-20 in Paper No. 6 is acknowledged. The traversal is on the ground(s) that the Office position is that one is patentable over the other and that such is simply not the case (i.e. that the prior art applied against one group of claims would not be applicable to the other group of claims in light of the restriction requirement). This is not found persuasive because the product as claimed could be manufacture by another and materially different process such as one which did not employ extrusion to form the multilayer film but rather employed heat lamination to form the same. As such, the prior art applied against the product claims would not be applied against the process claims. This is not to say that prior art applied against one set of claims would not have been applicable to the other set of claims, just that different processing may be required for the process verses what is needed to reject the article of manufacture. Additionally, there is clearly a search burden associated with keeping both sets of claims in the application as a search in class 428 would be required of the article while no such search is mandated for the process.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 1-11 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 6.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ottaviano '865 in view of either one of Fox or Kawakami, either one of Pharo or Lewicki et al and any one of Japanese Patent 10-151627, E.P. 483,665, or Clements.

The reference to Ottaviano '865 suggested that those skilled in the art at the time the invention was made would have incorporated a multilayer film in the formation of an inflated dunnage material. The reference suggested that the multilayer film was formed from three layers wherein the exterior layers 24 were formed of polyethylene and the interior layer 22 was formed of flexible nylon, see column 3, lines 59-62. The reference suggested that one skilled in the art would have formed the multilayer film via a coextrusion operation, see column 3, lines 62-column 4, line 5. the reference suggested that the interior layer of nylon material was provided as an oxygen barrier, see column 3, lines 66-67. the reference suggested that the so formed coextruded film would have been formed into the bubble wrap ® material by feeding one of the so formed films upon a vacuum embossing roller 56 where the sheet of material was embossed to form the wrap material as an embossed sheet FE. A second sheet of the material was heated and laminated onto the embossed sheet as a laminating sheet L to form the bubble wrap ®, see Figure 7 and the associated description of the same for a complete discussion of the bubble wrap® formation. The reference failed to expressly state that the coextruded films would have been fed to the embossing and laminating operations in the formation of the bubble wrap ® (but rather employed preformed coextruded films from a roll stock) and the reference employed nylon for the oxygen barrier material of the multilayer film rather than recycled polyester.

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Regarding the feeding of extruded films into an embossing and lamination operation for forming bubble wrap ®, the references to either one of Kawakami or Fox suggested that it was known to those skilled in the art at the time the invention was made to employ extruders in line with the embossing and lamination of the films in the manufacture of a dunnage in the form of bubble wrap ®. The applicant is more specifically referred to extruders D₁ and D₂ in Kawakami which were employed to extrude films F₁ and F₂ in the dunnage formation wherein one film was embossed and the other laminated upon the embossed film. The reference to Fox taught extruders 13 and 14 for extruding films 11 and 12, respectively which were fed to a embossing and lamination arrangement for forming bubble wrap ® materials. The applicant is advised that rather than feeding from a roll stock of coextruded material, one skilled in the art at the time the invention was made would have readily ascertained that feeding the materials from an extrusion die would have also provided one with an endless supply of the materials in the formation of bubble wrap ® materials. The combination, nonetheless failed to teach that those skilled in the art at the time the invention was made would have incorporated a recycled polyester material in the bubble wrap ® as an oxygen barrier layer in the same.

However, it was known as evidenced by any one of Pharo or Lewicki et al to provide an oxygen barrier in the manufacture of a bubble wrap and/or dunnage from polyester materials as well as nylon materials (i.e. that polyester would have been an art recognized alternative material for nylon which achieved the same function as the nylon barrier of Ottaviano '865. the reference to Pharo at column 8, line 66-column 9, line 4 suggested that plastic film materials including polyester were known to have been useful for manufacture of dunnage and such materials were additionally used for such purposes because it was air impervious. The reference to Lewicki et al

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suggested at column 2, lines 28-37 suggested that those skilled in the art would have readily appreciated that nylon or polyester films would have been useful in the manufacture of dunnage by virtue of the fact that the same was air impervious. It certainly would have been within the purview of the ordinary artisan at the time the invention was made to employ polyester as the gas impervious middle layer in Ottaviano '865 as such materials would have been a useful alternative material to the nylon disclosed therein which achieved the same function as the nylon in light of the teachings of either one of Pharo or Lewicki et al. the combination nonetheless failed to teach that those versed in the art would have selected recycled polyester as the polyester material used for the operation.

The references to any one of Japanese Patent 10-151627, E.P. 483,665, or Clements suggested that it was known in the art of polyester resins to included recycled polyester (and/or post consumed polyester) in the virgin polyester resin used in an extrusion operation to form a film of the same (where in some instances the film was subjected to a thermoforming operation as suggested by Clements for example). The ordinary artisan would have been led to employ the recycled polyester (recycled or post consumer PET) as such would have reduced the cost of the overall operation. Each of the references suggested that one would have been fully capable of using the recycled polyester to form a film therefrom via extrusion. It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ recycled polyester and extrude the same into a film in the operation as suggested by any one of Japanese Patent 10-151627, E.P. 483,665, or Clements (who suggested that recycling PET would have been desirable) in the operation of manufacturing a bubble wrap ® material where it was known that polyester would have been a suitable alternative to nylon for an air impermeable film in the

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assembly as suggested by either one of Pharo or Lewicki et al and wherein the film layers of the dunnage material would have been extruded in line with the bubble wrap ® formation as suggested by either one of Fox or Kawakami as such would have provided one with an endless supply of the film materials in the extruded and laminated operation of forming the dunnage as suggested by Ottaviano '865.

With regard to claims 13 and 14, the references suggested that the film would have been formed on the vacuum roller and the second film would have been laminated onto the so formed film in the manufacturing operation. Regarding claims 15, the fluid used to fill the bubble wrap ® was clearly air.

5. Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as set forth above in paragraph 4 further taken with Chavannes '387.

The references as set forth above in paragraph 4 suggested the overall operation, however there is no mention of embossing both films in the operation wherein the portions of the films which were not shaped on the vacuum roller were assembled together leaving larger air pockets between the films in the finished wrap assembly. However, as an alternative to forming a bubble wrap ® material with a single embossing roller, it was known as evidenced by Chavannes '387 to form the wrap from plural plastic layers which were both embossed and then joined after the embossing operation as evidenced by Figures 5 and 23. the applicant is referred to the above noted figures and the associated description as it relates to the formation of the dunnage from two films both of which were embossed prior to the joining operation. Additionally, it should be noted that such was described in Chavannes '387 as an alternative to single embossing operation on a single embossing roll, see Figures 1-4. certainly, as a function of the desired end

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product, it would have been obvious to one of ordinary skill in the art at the time the invention was made to mold both films prior to the lamination of the same in the manufacture of the bubble wrap ® as an alternative to formation wherein only a single film was molded and then laminated to an unmolded and unembossed film as suggested by Chavannes '387 in the process of manufacturing a bubble wrap ® material as set forth above in paragraph 4.

Regarding claim 16, note that both films would have been molded on the vacuum rollers in the manner claimed. Regarding claim 17, the fluid used to fill the bubble wrap ® was clearly air. Regarding claim 18, note that Chavannes suggested that one skilled in the art would have joined one film to the other in the regions where the unmolded portions laid (i.e. the ground regions of both films).

6. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as set forth above in paragraph 4 further taken with any one of Matarasso, DeLuca et al, Simhaee, or Larson '306.

The references as set forth above in paragraph 4 suggested the overall operation, however, the final laminated assembly does not require subsequent inflation after formation. The applicant is advised that such a cushioning material was well known at the time the invention was made and that one skilled in the art would have provided the bubble wrap ® material in such conditions because the shipping costs of the finished assembly would have been greatly reduced had one supplied the material in a deflated condition and inflated the same at the site where the material was to be used as dunnage as suggested by any one of Matarasso, DeLuca et al, Simhaee, or Larson '306. each one of Matarasso, DeLuca et al, Simhaee, or Larson '306 suggested that it was known per se to form bubble wrap ® wherein the same was provided in a

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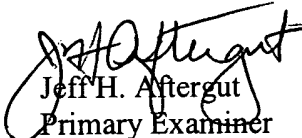
deflated condition and inflated by the end user at the local where the dunnage was needed. In each the individual pockets and/or bubbles to be inflated were connected together via channels and a central channel was used to inflate all of the chambers in the dunnage. Clearly, one skilled in the art would have desired to design the bubble wrap ® for post inflation in light of the savings associated with shipment of the bubble wrap ® to the customer. It would have been obvious to one of ordinary skill in the art at the time the invention was made to design the bubble wrap for post inflation including provision for channels interconnecting the bubbles as well as a central inflation channel as suggested by any one of Matarasso, DeLuca et al, Simhaee, or Larson '306 in the process of making a bubble wrap ® material as set forth above in paragraph 4.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff H. Aftergut whose telephone number is 703-308-2069. The examiner can normally be reached on Monday-Friday 6:30-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael W. Ball can be reached on 703-308-2058. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


Jeff H. Aftergut
Primary Examiner
Art Unit 1733

JHA
September 14, 2003